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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-------------------------|---------------------|------------------|
| 09/881,001 | 06/15/2001 | Per-Anders Kristian Lof | 203198US-8CIP | 7375 |

22850 7590 07/24/2006

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EXAMINER

NGUYEN, TAN D

ART UNIT PAPER NUMBER

3629

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 09/881,001 | Applicant(s) LOF ET AL. | |
| | Examiner Tan Dean D. Nguyen | Art Unit 3629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/018/025/034/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II, method claims 15-30, in the reply filed on 5/10/06 is acknowledged. The traversal is on the ground(s) that it's not serious burden to search both claimed inventions and the claims appear to overlap. This is not found persuasive because the claims are distinct and it's serious burden to examine both distinct groups (Method and System) with different databases for the search and for the reason set forth in office action of 4/11/06.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

2. The information disclosure statement (IDS) (4) submitted on (1) 11/16/01, (2) 8/30/2002, (3) 5/5/03 and (4) 4/25/05 were filed after the mailing date of the application on 6/15/01. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

3. **Claims 15-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

(1) In claim 15, the preamble calls for "to implement a virtual energy storage mechanism for the renewable power production facility" but fails to discuss how to carry out this subject in the body of the claim.

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(2) In claim 15, the 2nd step of "determining that an amount of power ... by a pre-determined quantity" is vague and indefinite because it's not clear how the "pre-determined quantity" is carried out since it appears that the renewable power production is a variable load which can not be pre-determined quantity.

(3) Claim 15 recites the limitation "said other power production" in the 1st step, or line 5. There is insufficient antecedent basis for this limitation in the claim. There are citations of "said another power production facility" on line 2 and line 8.

(4) Dependent claim 17 recites the limitation "said balance" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. **Claims 15-16 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over PEREZ (US 6,542,791).**

In summary, **Independent method claim 15** deals with a method for coordinating power output between several power generators/producers wherein one of the power generator/producer is a renewable power, comprising the steps of:

(a) producing an amount of electric power from (1) the renewable power producer and (2) other power producer;

(b) determining an amount of power produced by (1) renewable power producer that deviates (deviation) from a pre-determined threshold (value, target, or suggested);

(c.) informing said (2) other power producer of the deviation amount;

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(d) adjusting the power output of (2) other power producer for an amount that corresponds to the deviation amount of step (c.).

Similarly, **PEREZ** discloses a method for coordinating power output between several power generators/producers wherein one of the power generator/producer is a renewable power {col. 1, lines 38-40 "*use of photovoltaic systems*" or "PV systems", col. 3, lines 14-15 "*renewable resources, such as wind power generation*"}, comprising the steps of:

(a) producing an amount of electric power from (1) the renewable power producer and (2) other power producer;

(b) determining an amount of power produced by (1) renewable power producer that deviates (deviation) from a pre-determined threshold (value, target, or suggested);

(c.) informing said (2) other power producer of the deviation amount;

(d) adjusting the power output of (2) other power producer for an amount that corresponds to the deviation amount of step (c.). See col. 1, lines 51-56, col. 2, lines 25-60. Figs. 2-3. Note that PEREZ discloses that the variable load is powered by the power grid and the PV supply with a load adjustment threshold and controlling the load within a predefined range. Note that on col. 3, lines 10-15, PEREZ indicates that the renewable resources are non-controllable so that that controllable resources are other power resources from the power grid. As for the term "power production facility", this reads over "power producer system" or "power supply or generation" or "power plant" {see col. 3}. Also, the selection of any predetermined quantity or amount which depends on desired condition would have been obvious to a skilled artisan in view of

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the teachings of “pre-defined range” above. Therefore, it would have obvious to adjust the power deviation amount from the renewable resources with the other power from the power grid as taught by PEREZ above.

As for dep. claim 16 (part of 15 above), which deals with the type of renewable power, i.e. wind turbine, this is non-essential to the scope of the invention and is also taught in col. 2, lines 14-15.

9. Dependent claims 17-18 (part of 15 above) are rejected under 35 U.S.C. 103(a) as being unpatentable over PEREZ as applied to claims 15-16 above, and further in view of EDELMAN et al (US Patent 6,281,601).

As for dep. claims 17-18 (part of 15 above), which basically deals with mechanism for storing the excess/unused energy and monitoring or keeping an account of the storage amount, these are fairly taught in EDELMAN et al on Fig. 2, element (50) “ENERGY STORAGE (POWER SOURCE)” with bi-directional power controller (40) with various energy components which can be used to supply, store and/or use power in an efficient energy management manner {see col. 3, lines 40-55}. It would have been obvious to modify the teachings of PEREZ to include power controller and energy storage mechanism as taught by EDELMAN et al for efficient energy management manner.

10. Dependent claims 19-27 (part of 15 above) are rejected under 35 U.S.C. 103(a) as being unpatentable over PEREZ as applied to claims 15-16 above, and further in view of TAKRITI (US Patent 6,021,402).

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As for dep. claims 19-27 (part of 15 above), which basically deal with cost optimization of renewable power sources, i.e. offering a sale when market price is favorable, these are fairly taught in TAKRITI col. 4-7 which basically deal with a method for optimization cost for managing generating units of an electrical utility which handles multiple fuels (energy resources), fuel constraints, varying fuel prices, power trading, and load uncertainty, for the goal of meeting the electric demand of customers at a minimal cost while making the maximum profit possible from power trading {see col. 4, line 58 to col. 5, line 10. It would have been obvious to modify the teachings of PEREZ to include cost optimization of renewable power source (type of fuel) by the optimization teachings of TAKRITI for the purpose/goal of meeting the electric demand of customers at a minimal cost while making the maximum profit possible from power trading as taught by TAKRITI above.

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11. Dependent claims 28-30 (part of 15 above) are rejected under 35 U.S.C. 103(a) as being unpatentable over PEREZ as applied to claims 15-16 above, and further in view of PITCHFORD et al (US Patent 6,327,541).

As for dep. claims 19-27 (part of 15 above), which basically deal with the steps for implement the last step of (d) adjusting step by electronic and non-electronic communications, these are fairly taught in PITCHFORD et al Figs. 1A, elements 20, 22, 24, 28, Fig. 2B, col. 1, line 10, to col. 2, line 33 for the 4 benefits as cited on col. 2, lines 26-34. It would have been obvious to modify the teachings of PEREZ to include electronic and non-electronic communications for implementing step (d) as taught by PITCHFORD et al for at least 1 of the 4 benefits cited in col. 2, lines 25-34, or col. 1, lines 27-32, 55-60.

No claims are allowed.

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12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct@uspto.gov>. Should you have any questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

In receiving an Office Action, it becomes apparent that certain documents are missing, e. g. copies of references, Forms PTO 1449, PTO-892, etc., requests for copies should be directed to Tech Center 3600 Customer Service at (571) 272-3600, or e-mail CustomerService3600@uspto.gov.

Any inquiry concerning the merits of the examination of the application should be directed to Dean Tan Nguyen at telephone number (571) 272-6806. My work schedule is normally Monday through Friday from 6:30 am - 4:00 pm. I am scheduled to be off every other Friday.

Should I be unavailable during my normal working hours, my supervisor John Weiss can be reached at (571) 272-6812.

The main FAX phone numbers for formal communications concerning this application are (571) 273-8300. My personal Fax is (571) 273-6806. Informal communications may be made, following a telephone call to the examiner, by an informal FAX number to be given.

dtn
July 18, 2006


DEANT. NGUYEN
PRIMARY EXAMINER